

Website Architecture

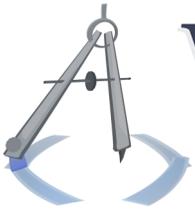
Course Policies

Syllabus

Michael Serritella

Summer 2012





Website Architecture

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General Information

Instructor: Mike Serritella

Office: 103 MCH, hours M/F 1:30-3:30, W 5:00-7:00

Email: mas04m@my.fsu.edu

Website: <http://www.CIS4930.com>

Classroom: LOV 103

Lectures: M/W 3:35pm - 4:50pm

Recitation: F 3:35pm - 4:50pm

Domain Description

Websites are a confluence of many technologies: multiple declarative languages, multiple imperative languages, asynchronous communication, databases, extremely diverse types of clients, and much more. This course develops the skills necessary to design such systems. Students are taught to deconstruct the sites they see into their technological components and to reconstruct and improve upon their designs. This course starts with the most basic declarative languages and adds dynamism through programming languages, concluding with the design requirements of data-driven, robust, secure sites which feature user authentication.

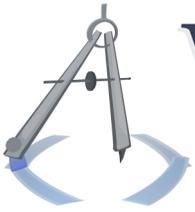
Course Objectives

This course intends to introduce the syntax, semantics, powers, and limitations of each large component of a comprehensive website, including its HTML, CSS, JavaScript, web forms, server request processing, server-side programming, and database. Above all, this is a course on site architecture and design, which presents the tradeoffs and interactions among all of these technologies. Given an idea for a comprehensive, systemic, dynamic site, the student should be able to delegate its features to the correct technologies, to dictate the basic algorithms of each technology, and to be able to develop the site with the aid of references.

Successful students are expected to complete the course using the following activities:

HTML and CSS; Page design Ability to present a static page without programming, including novel layout designs and content formatting





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JavaScript Programming Ability to handle common browsing events and modify page contents dynamically

Form Handling Ability to receive form submissions and store them, process them, and/or send them via email

Server Configuration Recognition of server request processing and ability to design new processing rules; application of simple server-enforced authentication

PHP Programming Basic development skills in PHP; ability to generate custom pages per each request, including data-driven pages and those including nontrivial authentication

SQL Programming Basic ability to create tables, insert records, and make queries, with design-level cognizance of views, triggers, and user-defined functions

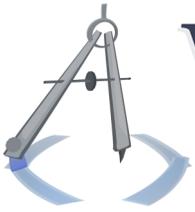
Asynchronous JavaScript & PHP Programming (Maybe/Time: Ability to communicate bidirectionally with the server once the principal request has been finalized)

Site Architecture Ability to design a coherent system which uses all of the above components

At the conclusion of the course, the successful student will be able to:

- Write a cleanly and robustly structured HTML document
- Write CSS rules which format and ornament the document
- Write JavaScript which affects basic page navigation and displays messages or popup windows to the user
- Write JavaScript which responds to common user events, such as a "mouseOver"
- Write JavaScript code which reads and writes page HTML after the page has been loaded
- Design pages which display and function sensibly in all modern browsers, with respect to their HTML, CSS, and JavaScript
- Embed multimedia content and programming objects, such as Adobe Flash movies and Java Applets
- Configure the server for custom request transformation and for simple authentication
- Generate HTML using a server-side programming language such as PHP
- Validate and handle an HTML form, including emailing or storing the submission
- Design simple databases using SQL, populate them with data, and retrieve their data
- Create database-driven pages using PHP and PHP's database abstraction library (PDO)
- Use sessions in PHP to maintain an authenticated connection with the client
- (Maybe/time: Communicate with the server-side programming language via JavaScript, using the Ajax paradigm)
- Design such a systemic site at a medium to high level of abstraction





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Prerequisites

The incoming student must have passed **COP3330: Object-Oriented Programming**. Object-oriented programming will be used pervasively in this course, though we will not use C++.

Required Materials

No textbook is required, though this really cool textbook called *Website Architecture* by Michael Serritella is recommended and cool. No software which costs money is required. All software will be provided, via a VMWare Player image, for added convenience (using this is not required).

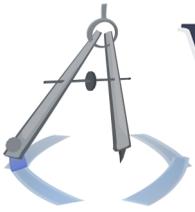
Coursework

The student's final grade consists of three categories: **Class Participation**, **Projects**, and **Exams**, which are worth **45%**, **30%**, and **25%**, respectively.

Class Participation will consist of substantive effort on the part of the student, including refraining from sleeping, becoming notably distracted, or distracting others. Absences deduct from the course-participation grade, though a number of unexcused absences are not counted as deductions. Students may earn points by answering questions upon being randomly chosen, and students may earn points by posing a question of equal merit as those which are asked of randomly-selected students. Productive classroom discussion is encouraged via a comfortable and inclusive environment, with humor encouraged, so long as it does not divide the focus of the class. In particular, quips must be audible and of finite length.

There will be three projects, with a weighted ratio of 2:2:1, respective to chronological order. Project descriptions will be posted as early as possible, even before their corresponding lessons. In most circumstances, there is no policy limiting the number of times which a project may be submitted, with feedback and refinement encouraged; the highest grade per each project is the one used for the course grade. All projects would then be due on one of the last Fridays in the term. Each project has a checkpoint date, before which a student must submit at least some of his/her work in order to retain the ability to submit the project more than one additional time. Submissions can be accompanied by retrospective consultations with the instructor in order to refine projects for resubmission. A retrospective consultation may be required in order to achieve a grade of an 80% or greater on each project, though one consultation may serve the requirements of multiple consultations. All projects will be





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assigned and collected during the regular semester. Any project missed without an acceptable excuse will receive a grade of zero (0).

There will be three exams, with a weighted ratio of 2:2:1, respective to chronological order. Questions from earlier topics may be given concurrent with the third exam, which could improve corresponding questions on earlier exams.

There will be no final exam which occurs after the regular semester. All exams must be taken on time. All exams occur during the regular semester.

Any examination missed without an acceptable excuse will receive a grade of zero (0).

The only acceptable excuses for missed projects and exams are:

- If submitted prior to the scheduled examination, evidence from a university official that you will miss the examination due to university-sanctioned travel or extracurricular activity;
- A note from a medical physician or university dean indicating an illness or other extraordinary circumstance that precluded sitting for an examination;
- A note from a medical physician or university dean indicating an illness or other extraordinary circumstance that precluded work during the time a project is assigned.

All excuses must be submitted in writing, must be signed by the excusing authority, and must include complete contact information for the authority, including telephone numbers and address.

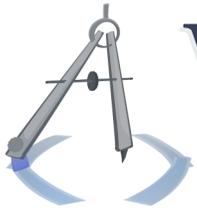
A missed examination with an acceptable excuse will receive the average score of all remaining examinations.

An acceptable excuse that applies during the time a project is assigned will receive additional days to work on the project, only up to the number of days covered by the excuse. Projects not submitted within the number of excused days past the project's original due date will receive a zero (0).

Grading Scale

The final grade will be assigned according to the following scale:





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90	A	70	C
88	B+	68	D+
80	B	60	D
78	C+	<60	F

No curve or arbitrary adjustment will be applied, and there will be no opportunities for grades over 100% on any component of the course. An Excel document will be distributed which is an exact copy of the one used to determine final grades, so that students may generate prospective grades and resolve their own questions.

Instructor Availability

The instructor will offer generous office hours, likely totaling about five (5) per week, and will be easily accessible through email.

Descriptions of projects may be available before their corresponding lessons have been given. In that case, the instructor reserves the right to defer questions about the material until after it has been presented to the class.

Academic Dishonesty

Students are subject to the Academic Honor Code published in *The Florida State University Bulletin* and the *Student Handbook*. The Academic Honor System of The Florida State University is based on the premise that each student has the responsibility (1) to uphold the highest standards of academic integrity in the student's own work, (2) to refuse to tolerate violations of academic integrity in the university community, and (3) to foster a high sense of integrity and social responsibility on the part of the university community.

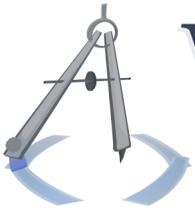
Please refer to the following web sites for a complete explanation of the Academic Honor Code.

<http://www.fsu.edu/Books/Student-Handbook/codes/honor.html>

<http://www.fsu.edu/Books/Student-Handbook/>

In particular, note that students may not give or receive help of any kind on programming projects. This means, among other things, that students are not permitted to read other student's code (on paper OR on screen) or discuss design or implementation of programming projects with anyone other





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than with the course staff. When studying for this course, collaboration among students is encouraged. However, all submitted projects and examinations are expected to be the work product of the individual student alone, performed without unauthorized assistance. There is a line between helping fellow students learn and performing work for someone else and we all know where that line falls. If a student is at all uncertain about any act of collaboration, he/she should discuss it with course staff before the act.

DO NOT work together on submitted projects. The work you submit must be yours, and yours alone. Do not attempt to sabotage course resources, including, but not limited to, Denial of Service attacks. Violations of this policy will result in expulsion from the course and a failing grade for all parties involved, as well as referral to further academic dishonesty proceedings as necessary.

Americans with Disabilities Act

Students with disabilities needing academic accommodation should: (1) register with and provide documentation to the Student Disability Resource Center; (2) bring a letter to the instructor indicating the need for accommodation and what type. This should be done during the first week of class.

For more information about services available to FSU students with disabilities, contact:

Student Disability Resource Center	(850) 644-9566 (voice)
97 Woodward Avenue, South	(850) 644-8504 (TDD)
Florida State University	
Tallahassee, FL 32306-4167	sdrc@admin.fsu.edu

<http://www.fsu.edu/~staffair/dean/StudentDisability/>

(This syllabus and other class materials are available in alternative format upon request.)

Syllabus Change Policy

This syllabus is a guide for the course and is subject to change with advance notice. Implementation details of these course policies may be specified by other documents. Notice of change will be in the form of an announcement on the course website and by voice in course lecture.

